

HAHN AND ASSOCIATES, INC.
ENVIRONMENTAL CONSULTANTS

June 15, 2012

Mr. Dana Bayuk
Oregon Department of Environmental Quality
Northwest Region, Portland Office
Portland Harbor Section
2020 SW Fourth Avenue, Suite 400
Portland Oregon 97201-4987

HAI Project No. 2708
DEQ ECSI File No. 84

SUBJECT: Progress Report, NW Natural Gasco Property, 7900 NW St. Helens Avenue, Portland, Oregon

Dear Mr. Bayuk:

Hahn and Associates, Inc. (HAI) has prepared this monthly Progress Report summarizing Remedial Investigation/Feasibility Study (RI/FS) and source control-related work activities conducted by NW Natural that have occurred relating to the Gasco property during the month of May 2012. NW Natural is completing upland investigatory activities at the subject property under the Voluntary Agreement No. ECVV-WMCVC-NWR-94-13 (Voluntary Agreement) between NW Natural and the Oregon Department of Environmental Quality (DEQ).

1.0 Communications and Document Submittals

DEQ and NW Natural met on May 2 to discuss the Beneficial Water Use Determination for the Alluvium Water-Bearing Zone at Gasco. Follow-up research by NW Natural and telephone discussions with DEQ related to this item also occurred during May in an effort to reach an agreeable resolution.

There was extensive email correspondence and telephone communication between Anchor QEA and DEQ during May regarding several data collection and analysis aspects of the TPH Fraction Data Gap Sampling Field Sampling Plan (FSP), with the revised FSP being submitted to DEQ by Anchor QEA on behalf of NW Natural on May 29, 2012 (Taku Fuji to Dana Bayuk).

In correspondence dated May 17, 2012 (Dana Bayuk to Ben Hung), DEQ summarized the status and priority of their review of 1) the TPH Data Gaps FSP; 2) the Gasco Risk Assessment Workplan; and 3) the various source control related documents and plans.

In correspondence dated May 17, 2012 (Dana Bayuk to Ben Hung), DEQ requested follow-up discussion concerning a May 14, 2012 routine City of Portland, Bureau of Environmental Services stormwater inspection as related to catch basin presence and location within the LNG plant area.

In correspondence dated May 22, 2012 (Ben Hung to Dana Bayuk), Anchor QEA requested that DEQ contact Rob Ede of HAI for discussions or questions regarding the May 14, 2012 stormwater inspection, as Mr. Ede was present during the referenced inspection.

In correspondence dated May 24, 2012 (Rob Ede to Dana Bayuk), HAI, on behalf of NW Natural, provided DEQ with sampling results and a request for concurrence regarding a

waste determination as pertaining to containerized purge and decontamination water generated by NW Natural within the spent TCE Contaminated Media Management Area (CMMMA).

NW Natural's responses to DEQ and EPA April 5, 2012 comments on the *Wastewater Treatment Final Design Report* were provided to DEQ on behalf of NW Natural by Severson Environmental Services, Inc. in correspondence dated May 25, 2012 (Terry Driscoll to Dana Bayuk).

2.0 Field Work

Field activities related to monitoring and maintenance of the dense non-aqueous phase liquid (DNAPL) extraction system at surficial fill well locations MW-6-32 and MW-13-30 occurred during May. The system recovered approximately 55 gallons of fluids (primarily DNAPL) during May. No DNAPL was manually removed from well PW-01-80 during May.

Discharge of treated water (groundwater from the LNG containment basin) to the City of Portland sanitary sewer was initiated on March 16, 2007 under Temporary Wastewater Discharge Permit 500.022 (expires February 15, 2017). Results of NW Natural's effluent sampling are provided to BES in Discharge Monitoring Reports that are submitted for any month that effluent sampling occurs – which is at least quarterly in accordance with the permit. As of May 31, 2012 a total of 5,537,938 gallons of treated water have been discharged to the sanitary sewer in 2012.

178.66 tons of stockpiled soil was loaded and transported to the Waste Management, Inc. Hillsboro Landfill as non-hazardous contaminated soil on May 11, 2012. The soil was characterized and profiled as described in correspondence to DEQ dated March 13, 2012 (Ben Uhl to Dana Bayuk) and was disposed under Hillsboro Landfill, Inc. Permit No. 1080630R. The soil was generated during construction activities within the Liquefied Natural Gas (LNG) Plant property area.

Upper alluvium extraction wells PW-2U, 3U, 5U, and 6U were re-developed and additional step drawdown tests were conducted at PW-2U and PW-3U.

The upper alluvium direct push boring to obtain samples for grain size analysis at the PW-13U location was advanced on May 24, 2012.

3.0 Anticipated Activities in June and July 2012

NW Natural and DEQ technical working group communications and meetings are anticipated to occur as needed during June and July 2012 to work toward approval of proposed workplans and discuss ongoing project tasks.

Step drawdown testing and data evaluation for upper alluvium extraction wells PW-2U, 3U, 5U, and 6U are expected to be completed in June. A technical memo documenting the results of the testing, model update, and extraction system design is anticipated to be submitted to DEQ in July.

In June Anchor QEA will submit a memo to DEQ containing recommendations for grain size testing of soil samples for upper alluvium extraction wells PW-1U, 4U, 11U, 12U, 13U, and 14U.

DEQ is presently reviewing information related to the Beneficial Water Use Determination for the Alluvium Water-Bearing Zone at Gasco as discussed during May. It is anticipated that additional follow-up discussion and resolution of the issue will be achieved during the late June or early July timeframe.

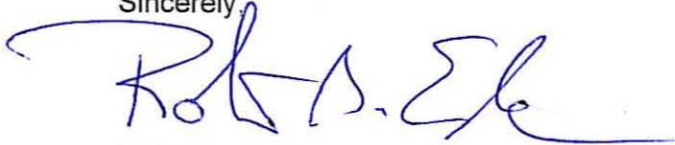
In a June 15 email DEQ approved the *2012 Field Sampling Plan, TPH Fraction Data Gap Sampling, NW Natural Gasco Site*. The field work is expected to be conducted in July 2012, subject to availability of a drilling contractor.

The following reports and work plans for the Site have been submitted to DEQ through the date of this progress report. Unless otherwise noted, these reports and work plans have not received DEQ review and comment.

- *Source Control Evaluation Report, "Segment 3" Siltronic Property Related to NW Natural "Gasco" Site*, February 19, 2009, Anchor QEA. Based on DEQ feedback, DEQ review of this document is prioritized behind reviews for Segments 1 and 2 Source Control Design documents and upland Risk Assessment-related reviews.
- *Final Stormwater Source Control Data Summary Report*, September 2010, Anchor QEA. Based on DEQ feedback, DEQ review of this document is prioritized behind reviews for Segments 1 and 2 source control design documents and upland risk assessment-related reviews.
- *Remedial Investigation Data Summary Report, Historical Manufactured Gas Plant Activities, Siltronic Corporation Property*, March 31, 2011, HAI. Based on DEQ feedback, it is understood that DEQ review is being conducted at this time, but the priority is lower than source control and risk assessment items.
- *Draft Revised Groundwater Source Control Construction Design Report (CDR)*, January 31, 2012, Anchor QEA. Along with the CDR the two work plans listed below were submitted to DEQ.
 - *Upper Alluvium Extraction Well Design Work Plan* (Anchor QEA, 2012).
 - *Work Plan to Assess Baseline Groundwater Conditions* (Anchor QEA, 2012).
- *Proposed Revisions to the Routine Groundwater Monitoring NW Natural – Gasco Facility*, dated March 9, 2011 (HAI, 2012). As of April 13, DEQ approval of modifications regarding cyanide testing has been received, but remaining proposed modifications remain under review. NW Natural and DEQ are currently in discussion concerning the outstanding proposed modifications.
- *Work Plan, Human Health and Ecological Risk Assessment, NW Natural Gasco Site, March 2012* (Anchor QEA, 2012).
- *Supplemental Remedial Investigation Field Sampling Activities, Doane Creek Embankment Soil and Sediment, Siltronic Corporation Property*, dated March 29, 2012 (HAI, 2012).
- *Supplemental Remedial Investigation Field Sampling Activities, DNAPL Characterization, Siltronic Corporation Property*, dated April 23, 2012 (HAI, 2012).
- *Discharge of Groundwater Monitoring Purge Water, NW Natural – Gasco Property*, dated May 24, 2012 (HAI, 2012).

Should you have any questions, please contact the undersigned.

Sincerely,

A handwritten signature in blue ink, appearing to read "Rob Ede, R.G.", with a stylized flourish at the end.

Rob Ede, R.G.
Principal

robe@hahnenv.com

- c:
- Ms. Sandra Hart, NW Natural (electronic only)
 - Mr. Bob Wyatt, NW Natural (electronic only)
 - Ms. Patty Dost, Pearl Legal Group PC (electronic only)
 - Ms. Sarah Riddle, Pearl Legal Group PC (electronic only)
 - Mr. Carl Stivers, Anchor QEA, L.L.C. (electronic only)
 - Mr. John Edwards, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ben Hung, Anchor QEA, L.L.C. (electronic only)
 - Mr. Ryan Barth, Anchor QEA, L.L.C. (electronic only)
 - Mr. Henning Larsen, DEQ NW Region (electronic only)
 - Mr. Tom Gainer, DEQ NW Region (electronic only)
 - Mr. Tom McCue, Siltronic Corporation (electronic only)
 - Ms. Kristine Koch, Region 10 EPA (electronic only)
 - Mr. Sean Sheldrake, Region 10 EPA (electronic only)
 - Mr. Rene Fuentes, Region 10 EPA (electronic only)
 - Mr. Chip Humphrey, Region 10 EPA (electronic only)
 - Mr. Lance Peterson, CDM, Inc. (electronic only)